MINI MEDIAM SPEED DOME CAMERA

User Manual

Power Supply DC 12V

Factory Configuration: PELCO-D protocol, Baud rate 2400, Address code 1

※Please read carefully before using this manual

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Chapter 1 Product Summarize

1.1 Technical Parameters (standard)

Model number	4 INCH MINI MEDIAM SPEED DOME CAMERA
Optical focus	10X 12X
Image sensor	1/3"CCD
Signal mode	PAL / NTSC
Resolution	480TVL / 540TVL / 600TVL/650TVL/ 700TVL
Optical focus	Manual/Auto, adapt high performance DSP to realize full digital high continuous focusing function.
Presets	256
Cruise scan	30 presets can join cruise
Other scan	Support Horizontal scan
Rotation range	Horizontal 360°unlimted rotation, Vertical 90°, auto reversal
Rotation speed	Horizontal & Vertical Min 0.01° Max 60°/s.
Communications	PELCO-D and PELCO-P
OSD	Input 95 on the keyboard to call the module menu
Temperature control system	Optional
Power supply	DC12V 2A
Ball cover dimension	4 inch optical glass cover

Material	Aluminum shell, waterproof IP66
Work environment	-20℃~+50℃(select temperature control accessories), <95%RH

1.2 Function description

1. Set address coding, baud rate, control protocol

Any operation commands the camera has its own objectives address coding, baud rate, control protocol, a single camera only to respond with its own address coding, baud rate, control agreement under the operation of the command. Camera address coding, baud rate, control protocol specific settings please refer to the DIP settings.

2. Target tracking

Users can use the controls on the keyboard joystick control of the upper and lower turning left and right cameras can be used to track moving targets or moving horizon, while the focal length can be adjusted to change the perspective of the size or the target image size. In the auto-focus of the state, with the lens rotation, the camera will automatically adjust according to a rapid scene changes, instantly get a clear picture.

3. Focal length / speed automatic matching technique

Manual adjustment, the longer the focal length of the case, a reflection of high-speed ball machine makes a slight touch screen joystick may move back, resulting in data loss. Based on user-friendly design, ball according to the proximity of the focal length of the camera automatically adjusts the horizontal and vertical speed,so that manual operation is more simple and easy to track targets.

4. Set and call preset position

Preset function is the current state of the ball under the PTZ function of the horizontal angle, tilt angle and camera lens focal length, etc. position parameters stored in memory, you need to call these parameters can be quickly and PTZ cameras will be adjusted to that location. The operator can quickly and easily by controlling the keyboard,

infrared controller, control equipment such as storage and call the preset point, the ball machine to support 256 preset points.

5. Lens Control

(1) Zoom control

Users can control the keyboard or through the ball machine to adjust the focus of the distance matrix of the host, receive the necessary panoramic images, or is a fine view.

(2) Focus Control

System default auto-focus, zoom, the camera lens will be the center of the screen features auto-focus, to maintain a clear picture; in exceptional circumstances, the user can manually focus, achieve the desired image effect.

When in manual focus state, to restore the auto-focus, as long as the sway bar can be restored remotely auto-focus. There is also a dedicated control commands can be issued or to call an arbitrary way of restoring a preset bit auto-focus.

The camera lens in the following situations will not autofocus on the camera objectives:

a. Target is not to screen center;

b. Targets the same time in the far and near the place;

c. Target light objects, such as neon lighting, spotlights and other luminous objects;

d. Target with droplets or dust behind the glass;

e. Targets moving too fast;

f. Large area targets, such as walls;

g. Objectives are too dark or inherently ambiguous.

6. Aperture Control

Users can control the keyboard to manually adjust the aperture size to get the required picture brightness.

7. Auto Backlight Compensation

When the backlight compensation function is open, the camera lens in the light background can be automatically targets the more the dark luminance compensation. On the bright background light adjustment, to avoid the background brightness caused by a mass of light throughout the picture, goals and not identifiable because of the darkness to gain a clear image.

8. Auto White Balance

According to the changes in ambient light, automatic adjustment, the true color reproduction.

9. Night vision function (color / monochrome conversion)

Cameras with night vision function, automatic color / monochrome conversion mode, in accordance with changes in ambient light automatic conversion CCD illumination. Such as: adequate lighting during the day due to the use of general illumination to ensure colorful images. In the night illumination can be automatically changed to black and white images show a clear interest.

10. Cruise

Can be pre-set cruise preset point, certain preset points, organized in the order required to auto-cruise in the queue, only an external command can be in an indoor speed ball set automatically according to preset points in order to provide the time interval constant movement back and forth.

11. Continuous scan

Just an external command or through a power-on action, free movement, alarm linkage, etc. to call, can make the ball machine horizontal direction to a certain speed the cycle of continuous scanning.

Chapter 2 Equipment installation

2.1 DIP switch setting

Four DIP switch is the baud rate and the control protocol switch.

Eight DIP switch is the address code setting switch

DIP switch to “ON” means to “1”, DIP switch to "OFF" means "0".

The baud rate and control protocol as the following table:

NO.	1	2	3	4	
Control protocol	ON	OFF			PELCO-D
	OFF	OFF			PELCO-P
Baud rate (BPS)			OFF	OFF	9600
			ON	ON	9600
			OFF	ON	4800
			ON	OFF	2400

8-bit DIP switch is used to set the dome camera address coding. Address set binary mode can be set to a total of 256 different dome camera address coding, see coding table address.

Camera address	Camera address coding form							
	1	2	3	4	5	6	7	8
0	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF

3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
…	…	…	…	…	…	…	…	…
246	OFF	ON	ON	OFF	ON	ON	ON	ON
247	ON	ON	ON	OFF	ON	ON	ON	ON
248	OFF	OFF	OFF	ON	ON	ON	ON	ON
249	ON	OFF	OFF	ON	ON	ON	ON	ON
250	OFF	ON	OFF	ON	ON	ON	ON	ON
251	ON	ON	OFF	ON	ON	ON	ON	ON
252	OFF	OFF	ON	ON	ON	ON	ON	ON
253	ON	OFF	ON	ON	ON	ON	ON	ON
254	OFF	ON	ON	ON	ON	ON	ON	ON
255	ON	ON	ON	ON	ON	ON	ON	ON

2.2 Dome camera structure diagram

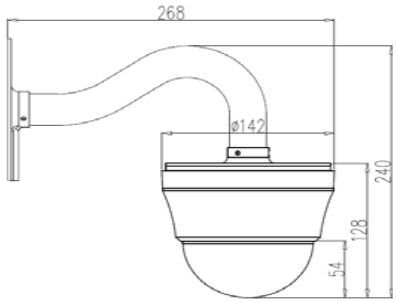

Figure 1

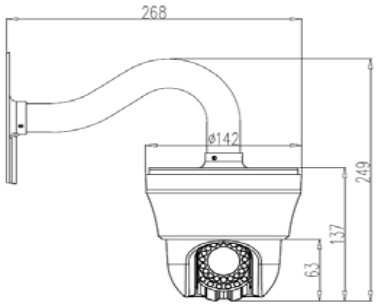

Figure 2

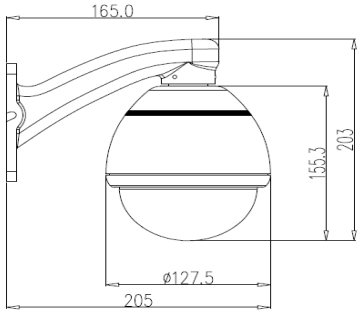

Figure 3

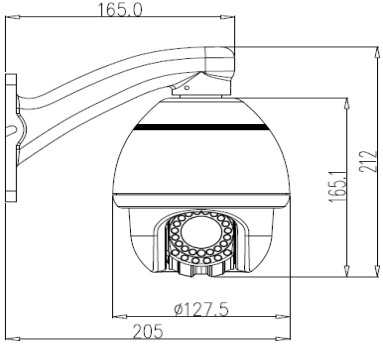

Figure 4

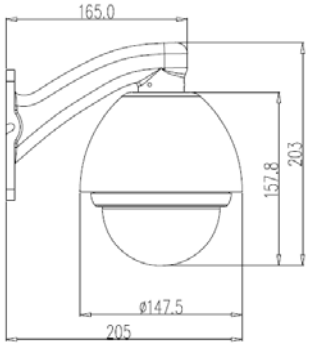

Figure 5

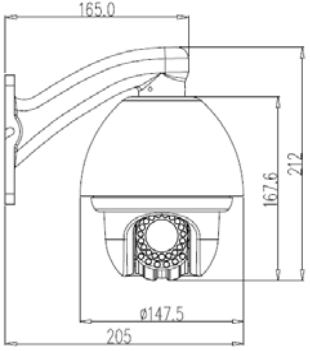

Figure 6

2.3 Bracket installation diagram

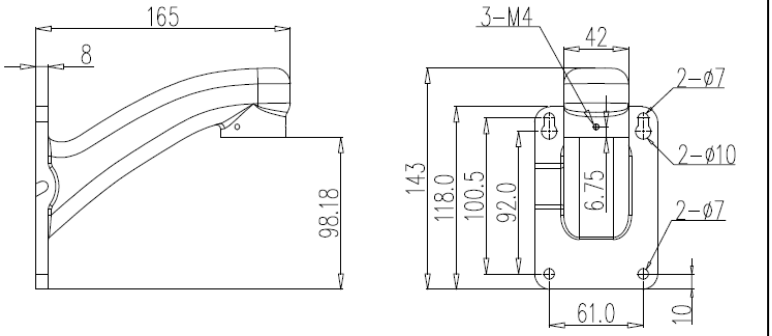

Figure 7

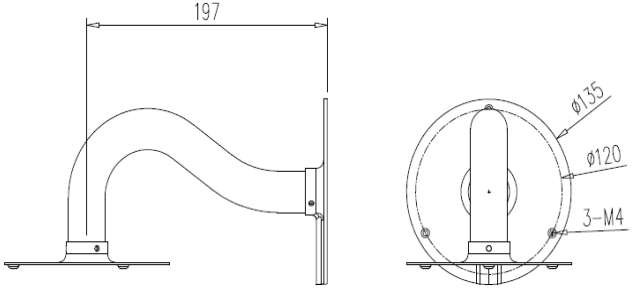

Figure 8

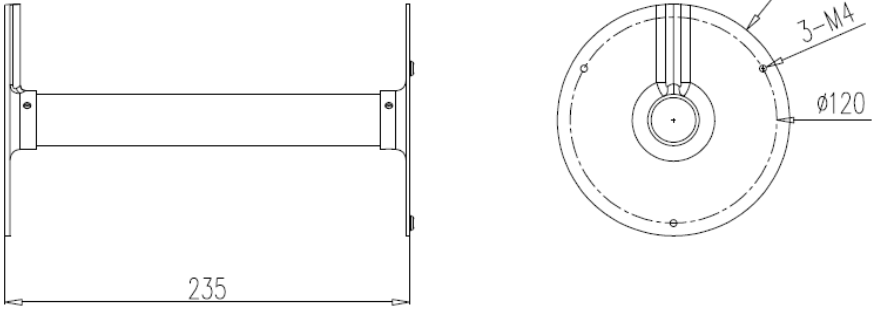

Figure 9

Chapter 3 System OSD menu settings

3.1 Power-On Self-Test

When power is connected to the dome camera, the camera in horizontal and vertical direction movement, the screen will appear system-related information, the dome camera self-test to complete the following diagram.

PELCO-D-2400-001

Display: PELCO-D protocol、Baud Rate 2400、Address code 1

3.2 Preset point setting and calling

3.2.1 Set Preset points:

(1) selected camera (see manual control of the keyboard);

(2) operation Rocker, zoom button, focus button, buttons adjust the camera aperture screen;

(3) Press the number keys + PRESET (input designated preset) to preserve the scene preset parameters.

3.2.2 Call preset points:

(1) Selected camera;

(2) Press the number keys (inputs the designated preset) + PREVIEW button, the camera immediately move to the preset position, the lens zoom, focus and Iris is also automatically change to the preset parameters; if the input is a special function preset point (see "Preset Point menu"), the dome camera will perform with special features preset point of the corresponding functions (such as: Enter the 80th presets, the camera will perform auto-tracking feature).

3.3 Preset point function table:

Dial the 95th Presets	Enter module menu
Redial the 95th Presets	Cancel module menu
Dial the 83th Presets	clear all presets
Dial the 98th Presets	presets cruise
Dial the 99th Presets	360 degree continuing scan

3.4 <MAIN MENU>

The dome camera power on and working properly, call the 95 preset points into the module menu, screen display as shown in the Table 3-1.

3.5 <CAMERA> (Lens settings)

LANGUAGE	Chinese/English
CAMERA ID	001
ZOOM DISPLAY	ON/OFF
BLC	ON/OFF
AGC	MIDDLE/MAX/MIN
DAY/NIGHT	AGC/AUTO/COLOUR/ B/W
FOCUS	AUTO/MANU/KAUTO
BAUD RATE	9600
BRIGHTNESS	02
SHARPNESS	07
MIRROR	OFF

HLM	OFF
HLM LEVEL	1F

TABLE 3-1 CAMERA SETTINGS

Chapter 4 Simple troubleshooting and maintenance

4.1 Simple Troubleshooting Table

Failure	Possible Cause	Solutions
Electricity without action, no images, light does not shine.	Connected the wrong power cord	Corrections
	Power supply is damaged	replace
	Bad fuse	replace
	Power cord connection is bad	Exclusion
Power are self-test, there are images, not control	IR uniform dome camera address code, the baud rate setting does not	To re-set the high-speed dome address code and baud rate
	Wrong protocol	corrections
	RS485 line reversed or open	Check wiring RS485 control line

Unable to complete self-test, there are images associated with motor tweet sound	Mechanical failure	Maintenance
	Camera Tilt	Straightened
	Power is not enough	Replacement to meet the requirements of the power supply, it is best to power the camera on the near-infrared uniform
Image instability	Video line connection is bad	Exclusion
	Power is not enough	Replace
Blur	Manual focus on the state	Operation of any infrared high speed dome camera or call a preset point
IR control of a high-speed dome camera non-stop or delay	Power is not enough high-speed Dome	Replacement to meet the requirements of the power supply, it is best to power on the high-speed dome camera in the vicinity
	Check control of the most distant high-speed dome camera match whether to join the resistance	The most far away from the control of the ball-type cameras by adding matching resistor
	Far from 485 the signal attenuation	Bold Line of Control
	Converter 485 is not enough driving force	Replacement of a source converter

4.2 After Service

Dear users, in order to ensure the full enjoyment of your camera services, please read the following products and services charter.

(A): IR dome camera company limited warranty and lifetime maintenance services

1. The limited warranty period from the date of sale for 12 months, in the limited warranty period, you will enjoy the products fault free service, delivered or sent by the user's maintenance (improper use of man-made causes of failure or an irresistible. The fault does not belong to the scope of the warranty).

2. In more than 12 months limited warranty from the date of the product life-long failure of the implementation of paid maintenance services.

(B): The dome camera repair response time

1. Users will be sent to the company from the date of product, 24-hour response service.

2. Customers return products to our company, please advance with my company-related contact, and then returned to our company products. Otherwise, the situation appears not timely maintenance by the user themselves.

Product Warranty Cards

Under this warranty cards note that every case of normal use the product itself due to quality problems caused by failures in the warranty period will be given free maintenance.

Warranty Description:

1. This product is free of charge warranty period of one year, during the warranty period any product quality problems occur, so doing the warranty card for free (non-human damage), life-long maintenance.

2. A result of improper use or other reasons as well as the failure of products outside the warranty period can be so doing card repair, free of maintenance, only the income component costs.

3. Product required maintenance should be a copy of this card and the invoice with the product delivery of the Company or the local special maintenance department.

4. Secretly open the dome camera casing, tearing up letters labeling, according to the provisions of collecting maintenance fees and components and other expenses.

5. Does not accept any modification or installation of other functions due to failure after the dome camera.

The following conditions will not be free of charge Warranty:

1. Due to normal wear and tear caused by periodic inspection, maintenance, repair or replacement parts.
2. As the fall, extrusion, soaking, damp, and other man-made damage.
3. Because of flood, fire, lightning and other natural disasters or force majeure of the factors that damage.
4. By non-authorized repair centers repair the machine off.
5. Listed above, if changes to the relevant provisions shall prevail.

Model Number			
Factory Number			
Date of manufacture			
Customer Unit			
Name			
Address			
Telephone			
Maintenance date	Failure condition	Maintenance site	Maintenance result

Remark: _____

_____